

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method of forming a particle mass comprising at least two particle populations arranged in a desired graded relationship, the method comprising:

forming in a container a first layer of dry particles constituting a first particle population having a desired particle size distribution,

superimposing on the first layer a second layer of dry particles constituting a second particle population having a desired particle size distribution,

the second layer being in direct contact with the first layer at a contact interface, and

causing the particle mass in the container to vibrate to cause a desired degree of migration of particles from one or both layers across the contact interface under the influence of force experienced by particles in the mass.

2. (Currently Amended) A method as claimed in claim 1 wherein the particle mass in the container is caused to vibrate under the influence of gravitational force, and/or centripetal force, and/or magnetic force, and/or electromagnetic force, or combinations thereof.

3. (Currently Amended) A method as claimed in claim 1 ~~or claim 2~~ wherein the particle mass is caused to vibrate by vibrating the container.

4. (Currently Amended) A method as claimed in ~~any of claims 1 to 3~~ claim 1 wherein one or more additional dry particle layers is/are successively stacked on the second or a subsequent layer of the stack,

each additional layer comprising dry particles constituting a particle population

having a desired particle size distribution,

each additional layer being in direct contact at a contact interface with the layer on which it is superimposed, and

the particle mass is vibrated after completion of, or at intervals during the assembly of the stack to cause a desired degree of migration of particles across one or more of the contact interfaces under the influence of gravitational, centripetal force or other applied forces.

5. (Currently Amended) A method as claimed in ~~any of the preceding claims~~ claim 1 wherein one or more layer of particles also contains whiskers, ~~and/or microfibres,~~ or combinations thereof.

6. (Currently Amended) A method as claimed in ~~any of the preceding claims~~ claim 1 wherein at least two particle layers in direct contact at a contact interface comprise particle populations which are selected such that the population of one layer has a desired set physical properties, and/or chemical properties, or both different from that of the population of the other layer.

7. (Currently Amended) A method as claimed in ~~any of the preceding claims~~ claim 1 wherein the container containing the particle layers is a mould defining the desired shape of the particle mass.

8. (Currently Amended) A method as claimed in ~~any of the preceding claims~~ claim 1 wherein the particle mass in the container is pressure compacted during or after the vibration step.

- 9- (Currently Amended) A method as claimed in ~~any of the preceding claims~~ claim 1 wherein at least one particle layer comprises ceramic particles.
10. (Currently Amended) A method as claimed in ~~any of claims 1 to 9~~ claim 1 wherein at least one particle layer comprises metal particles.
11. (Currently Amended) A method as claimed in ~~any of claims 1 to 10~~ claim 1 wherein at least one particle layer comprises polymer particles.
12. (Currently Amended) A method as claimed in ~~any of claims 1 to 8~~ claim 1 wherein a particle layer comprising ceramic particles is superimposed at a contact interface on a particle layer comprising metal particles or vice versa.
13. (Currently Amended) A method as claimed in ~~any of the preceding claims~~ claim 1 wherein at least one particle layer is prepared by pre-blending the components thereof prior to forming the layer in the container.
14. (Currently Amended) A method as claimed in ~~any of the preceding claims~~ claim 1 wherein after the vibration step the particle mass is fused into a coherent article.
15. (Currently Amended) An article obtained by the method of claim 14.